Task Editing

Tap any blank space onscreen to enter Edit Status.

1. Edit Waypoints
   Move: Drag the waypoint to move.
   Fine Tuning: Tap the waypoint to show Fine Tuning buttons. Tap to adjust.
   Delete: Tap twice to delete a waypoint.

2. Adjust Route
   Route Direction: Tap and drag the ⊙ icon near the route to adjust the flight direction of the produced route.
   Line Spacing: Tap the |↔| icon at the top of the screen to adjust the line spacing between two neighboring lines.
   Safety Distance: Tap the ••• icon on top of the screen, and then adjust the safety distance between the route and the edge of the field or obstacle in ⚙ Aircraft Settings.

3. Edit Obstacles
   Tap and hold the marked obstacle or the position that needs to mark an obstacle on the screen to choose the shape and size of the obstacle in the menu.
   Tap the obstacle on the screen which has waypoints added, then follow the Edit Waypoints instructions to edit the added waypoints for complete obstacle information.

⚠ If a route error appears in the app after importing data from the mapper to the remote controller, it is because of the short distance between two obstacles. Edit the obstacles in the app to clear this error.

4. Tap “Save”, and then name the task, choose crop, and configure other parameters.

Starting a Task

1. Place the aircraft at one of the previously set calibration points and then power it on.
2. Toggle the flight mode switch to F-mode. Power on the remote controller and go to Operation View in the DJI MG app > ••• > 🚜 > Connected DJI Device Type. Make sure to choose “MG-1S”.
3. Tap Task List onscreen, choose a previously saved task, and then tap Use Task.
4. Tap Rectify Offset and then Rectify Aircraft Position, or adjust the route position via the Fine Tuning buttons and then tap OK.
5. Tap Start, and then set work type.
6. Takeoff and start the task.
   ① If you fly to the targeted height, a Slide to Execute prompt will appear onscreen. Slide to start spraying.
   ② If the aircraft is on the ground, a Slide to Takeoff prompt will appear onscreen. Slide to takeoff and start spraying.

⚠
- Be sure to takeoff in open areas.
- The task will be automatically cancelled if the motors are started before beginning the task. You will need to recall the task in the task list.
- Once started, the aircraft will fly to the starting point of the route and lock its heading in the direction of the first turning point for the duration of the flight path.
- During the task, the aircraft automatically sprays liquid while flying forwards or backwards, and it doesn’t spray liquid while flying left and right. Users can adjust work efficiency (flying speed and spray rate included) and height above the crops in the DJI MG app.
- The aircraft will hover at the ending point of the flight route after the task is completed.

Aircraft

Profile

The MG-1S / MG-1S RTK uses DJI's dedicated A3 Flight Controller to provide three flight modes and operation modes for various applications. A Radar Terrain Follow System guides the aircraft to maintain a constant distance above crops in each flight or operation mode. Functions such as operation resumption, system data protection, empty tank warning, Return to Home (RTH) and low battery level warning are also available. The MG-1S RTK has a built-in DJI Onboard D-RTK, providing more accurate data for centimeter-level positioning to ensure more precise and stable flight when used with the DJI D-RTK Base Station.

- When using your MG-1S / MG-1S RTK for the first time, activate it in the DJI MG app. Your DJI account and internet connection are required.
- Effective use of pesticides relies on pesticide density, spray rate, spray distance, aircraft speed, wind speed and wind direction. Consider all factors when using pesticides.
- Always fly at an appropriate height above crops to avoid damage.

Operation Modes

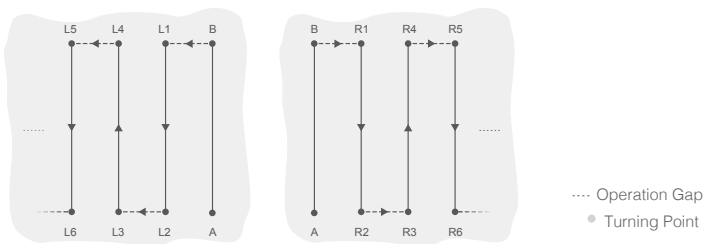
When the Flight Mode Switch is set to P, the MG-1S / MG-1S RTK provides Smart, Manual, and Manual Plus operation modes. Switch to one of the three modes via the Operation Mode switch on the remote controller.

Smart Operation Mode

In Smart operation mode, the aircraft will travel along a pre-planned route. Operation resumption, data protection, and the Radar Terrain Follow System are available in this mode. Use the Settings dial on the remote controller or app to adjust work efficiency (including flying speed and spray rates). Smart operation mode is recommended for large, rectangular spray areas.

Operation Route

The aircraft will travel along a pre-designated square zig-zag route after recording turning points A and B. Under optimal working conditions, the aircraft maintains distance from the vegetation. The length of the dotted lines, called Line Spacing, can be adjusted in the DJI MG app.



Operation Procedure

⚠
- Maintain line of sight of the aircraft at all times.
- Set the Flight Mode switch to P when GNSS signal is strong. Otherwise, Smart operation mode may be unreliable.

Always inspect operating environments before flying.

Set the remote controller's Flight Mode Switch to P when a strong GNSS signal is present. In addition, set the Operation Mode switch to M.

1. Record Points A and B in Order

   Users cannot set the Operation Mode switch to Smart operation mode until they have recorded points A and B.

   Fly the aircraft to the starting point, depicted as Point A/B, hover, and then press Button A/B on the remote controller or tap Point A/B onscreen. The icon for Point A/B will change from gray to purple and the Aircraft Status Indicator will blink red/green after recording the starting points.

⚠
- Points A and B cannot be recorded if the spray tank is empty.
- Update Point B by flying the aircraft to a new position to record. Note that if you update Point A, you must also update Point B.
- It is recommended to keep the direction of Point A to B parallel to one side of the rectangular spray area for optimal effect.

- After recording Point A, there will be a menu prompt for work type settings. Set the amount of pesticide per acre and work type. Use the slider to adjust work efficiency. During the task, tap the icon at the top of the screen to adjust parameters. You can also adjust work efficiency via the Settings dial on the remote controller.
- The DJI MG app will display an icon of line spacing. Tap to adjust the value. The line spacing cannot be adjusted during operation. Switch to Manual or Manual Plus operation mode to adjust the value, then go back to Smart operation mode.

2. Select the Route

   Press the C1 or C2 buttons on the remote controller to select the operating pattern. Press C1 for Route L and C2 for Route R. The default route pattern is Route R if no selection has been made.

⚠ Users can select the route in Manual operation mode only. If the aircraft is in Smart operation mode, select the route after switching to Manual operation mode.

3. Configuring Aircraft Altitude

   Configure the desired altitude in the DJI MG app and adjust the aircraft altitude to a value within the working range of the Radar Terrain Follow System (1.5-3.5 m) by using the throttle stick before entering Smart operation mode. The Radar Terrain Follow System will start working automatically and maintain the spraying distance between aircraft and vegetation. Refer to the Radar Terrain Follow System for details.

4. Using Smart Operation Mode

   Set the remote controller's Flight Mode switch to P and ensure that a strong GNSS signal is present, then set the Operation mode switch to S to enable Smart operation mode.

- If, after recording Points A and B, you fly the aircraft more than five meters away from Point B and the Operation Mode switch is not set to S, Resume will appear on the lower right corner of the screen when you enter Smart operation mode. Tap Resume, and the aircraft will automatically fly to Point B to re-enter Smart operation mode.
- When using the control sticks to control the aircraft in Smart operation mode, the aircraft will automatically switch to Manual operation mode, complete corresponding flight behavior, and then hover. To resume the task, set the Operation Mode switch to S, then tap Resume onscreen. The aircraft will return to Smart operation mode, then resume flying along the operation route. Refer to Operation Resumption (p. 35) for details.

5. Starting the Operation
   a. Press the remote controller's C1 and C2 buttons simultaneously. The aircraft will align with the line between Points A and B with its heading pointing toward Point B. Fly laterally from Point B to L1/R1, then hover at Point L1/R1 and wait for further instructions.
   b. Repeat the previous step and the aircraft will fly to the next turning point along Route L/R and hover.
   c. Enable Continuous Smart operation mode by pressing and holding the C1 and C2 buttons simultaneously for 2-4 seconds when the aircraft is hovering at any given turning point. The Aircraft Status Indicator will turn solid purple for one second. The aircraft will then fly along Route L/R continuously. The DJI MG app will display the A-B Route.
   d. To exit Continuous Smart operation mode, press and hold the C1 and C2 buttons simultaneously for 2-4 seconds. The aircraft will fly to the next turning point and hover.

- The nose of the aircraft will always point from Point A to Point B regardless of flight direction. Heading cannot be adjusted.
- You will only be able to press and hold the C1 and C2 buttons for steps a to c when the aircraft is hovering at a turning point.
- If GNSS signal is weak during operation, the aircraft will automatically switch to Attitude mode. Exit Smart operation mode and control the aircraft manually. When the aircraft regains a strong GNSS signal, it will automatically fly to the next turning point.
- If you press the A or B buttons during operation, the data for Points A and B of the current route will be erased and the aircraft will hover in place.

- The line spacing can be customized from 3-10 m in DJI MG. It is set to a length of 5 m by default.
- Even though the heading of the aircraft cannot be adjusted, use the control sticks to avoid obstacles. Refer to Manual Obstacle Avoidance (p. 36) for details.
- The aircraft automatically sprays liquid when flying forwards or backwards, and does not spray when flying left or right or when hovering.

Manual Operation Mode

Set the Operation Mode switch to M to enter Manual operation mode. You can control all the movements of the aircraft, spray liquid via the remote controller's Spray button, and adjust the spray rate via the dial. Refer to Controlling the Spraying System (p. 22) for details. Manual operation mode is ideal when the operating area is small.

Manual Plus Operation Mode

Set the Operation Mode switch to M+ to enter Manual Plus operation mode. The aircraft's' Maximum flying speed is 7 m/s (customizable in the DJI MG app), the heading is locked, and all other

movement can be manually controlled in this mode. Press the C1 or C2 buttons on the remote controller to steer the aircraft left or right. The aircraft sprays liquid automatically when flying forward or backward, and does not spray when flying left and right. Manual Plus operation is ideal for irregularly-shaped operating areas.

1. Elevate the aircraft to the desired altitude within the working range of the Radar Terrain Follow System (1.5-3.5 m) before entering Manual Plus operation mode. The Radar Terrain Follow System starts working automatically by maintaining the spraying distance between the aircraft and the vegetation below. Refer to Radar Terrain Follow System for details.
2. Ensure that the aircraft is in P-mode and the GNSS signal is strong (≥10 connected satellites). Then set the Operation Mode switch to M+ to activate Manual Plus operation mode.

- If the line spacing has been adjusted in Manual Plus operation mode, the value of Smart operation mode will apply the adjustment.
- Spray rate will be adjusted automatically according to the flying speed.
- Maximum spray rate, maximum flying speed, line spacing, and height above the crop can be adjusted in the DJI MG app.
- The aircraft cannot be controlled when using the C1 or C2 buttons to steer the aircraft to the left or right. Switch to Manual operation mode in case of emergency, and the aircraft will stop flying.

Operation Resumption

When exiting Smart Operation Mode or a route task, the aircraft will record a breakpoint. The Operation Resumption function allows you to pause an operation temporarily (e.g., to refill the spray, change battery, and avoid obstacles manually) and then resume operation at the breakpoint.

Instructions

Recording a Breakpoint

Exit Smart operation mode or F-mode through one of the following methods and the aircraft will record its location as a breakpoint if GNSS signal is strong:

1. Set the Operation Mode switch out of Smart operation mode.
2. Initialize the RTH procedure.
3. Set the Flight Mode switch out of P-mode or F-mode.
4. Push the Pitch or Roll stick in any direction on the remote controller.

- Ensure that GNSS signal is strong when using the Operation Resumption function. Otherwise, the aircraft cannot record and return to the break point.
- The breakpoint will be updated as long as you set the Operation Mode switch to any other mode besides Smart operation mode, the Flight Mode switch to any other mode besides P-mode or F-mode, and you trigger RTH during Smart operation mode or F-mode.

Resume Operation

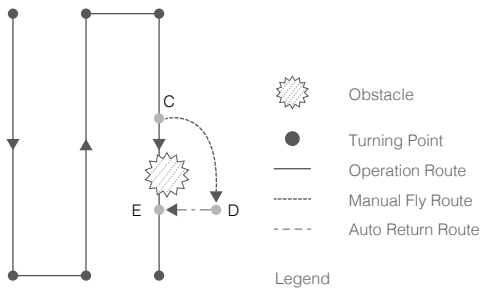
1. Exit Smart operation mode or F-mode through one of the four above methods. The current location of the aircraft will be recorded as the breakpoint.
2. Fly the aircraft to a safe location before resuming operation. If the Radar Terrain Follow System is enabled, adjust the spraying distance between the aircraft and the vegetation to be within working range (1.5-3.5 m).

3. Resume
   a. Back to the following modes:
      Smart operation mode — Set the Flight Mode switch to P and the Operation Mode switch to S.
      F-mode — Set the Flight Mode switch to F.
   b. Tap Resume on the lower right corner of the DJI MG app.
4. Return Route
   If the aircraft is in the operating area, there will be prompt in the DJI MG app. Users can select from returning to the breakpoint or the operating route along a path vertical to the operating route. If the aircraft is out of the operating area, it will return straight to the breakpoint and resume operation.
5. If obstacle avoidance is required during the return procedure, users can control the aircraft forwards, backwards, left, and right. Refer to Manual Obstacle Avoidance for details.

Typical Applications

In Smart operation mode or F-mode, users can control the aircraft forward, backward, left, and right, avoiding obstacles along the operation route, or in an emergency (e.g., abnormal aircraft behavior). The following instructions describe how to avoid obstacles manually:

Manual Obstacle Avoidance



1. Exit Smart Operation Mode or F-mode
   In the two modes, when using the control sticks to control the aircraft forward, backward, left or right (i.e., push the pitch or roll stick), the aircraft will automatically exit the current mode, pause the task and record the current position as a breakpoint (Point C), then complete the corresponding flight behavior and hover.

⚠ When pushing the control sticks to exit Smart Operation mode, the aircraft will need a braking distance. Ensure that there is a safe distance between the aircraft and any obstacles.

2. Avoid an Obstacle
   After switching to Manual operation mode, users can control the aircraft to avoid the obstacle from Point C to D.
3. Resume Operation
   Enter the corresponding mode, and then tap Resume in the DJI MG app. If the aircraft is in the operating area, there will be a prompt in the DJI MG app. Select Fly to Project Point. If the aircraft is out of the operating area, it will return straight to the breakpoint and resume the operation.

- To avoid risk, ensure that the aircraft has completely avoided the obstacle before resuming operation.
- In the event of an emergency, ensure that the aircraft is in normal status and then fly the aircraft manually to a safe area to resume operation.

Repeat the instructions above to exit and resume operation in the event of an emergency (i.e., whenever obstacle avoidance is required) during the return procedure.

System Data Protection

The System Data Protection feature enables the aircraft to retain vital system data (e.g., Point A, Point B, breakpoint) for about 30 seconds after the aircraft is powered off. Retaining vital system data allows the aircraft to resume operation after a short, temporary pause. Follow the instructions below to use this feature:

1. Exit Smart operation mode or F-mode. The current location of the aircraft will be recorded as the breakpoint.
2. Land the aircraft and stop the motors.
3. Once the aircraft is powered off, System Data Protection is automatically triggered, indicated by The Aircraft Status Indicator glowing solid green.
4. Replace the battery within the 30-second window
5. Restart the aircraft and enter Manual operation mode.
6. Ensure that the GNSS signal is strong, then start the motors.
7. Follow the instructions in Operation Resumption to resume the operation.

System data can only be retained for 30 seconds. DO NOT power off the aircraft for more than 30 seconds if you want to resume operation, as system data will be lost.

Radar Terrain Follow System

Profile

The Radar Terrain Follow System consists of forward, rear, and downward radar modules that use microwave technology to follow the terrain. In an optimal operating environment, the system can predict the distance between the aircraft and the crop or other surface in forward, rear, and downward directions to fly at a constant distance to ensure even spraying. The function is enabled by default, and can be disabled in the DJI MG app. When enabled, the aircraft will fly above the crop at a constant spraying distance in Smart and Manual Plus operation modes and F-mode. In Manual operation mode, the system can also measure the spraying distance above the vegetation or other surface, but the aircraft will not be able to fly at a constant spraying distance.

Using the Radar Terrain Follow System

1. Ensure that you have enabled the Radar Terrain Follow System in the DJI MG app.
2. Configure the desired spraying distance (1.5-3.5 m).
3. If using Smart or Manual Plus operation mode, ensure that you have set the Flight Mode switch to P and the Operation Mode switch to M. If using F-mode, ensure that the Flight Mode switch is set to F. Fly the aircraft above the vegetation and adjust the distance between the aircraft and the vegetation to a value within the working range (1.5-3.5 m).

4. Set the Flight Mode and Operation Mode switches to the desired position to enter the corresponding mode. If the operating environment is ideal, the aircraft will fly above the vegetation at the preset height.

⚠
- The Radar Terrain Follow System will only maintain a fixed distance from vegetation within its working range (1.5-3.5 m).
- Observe the aircraft's distance from the vegetation at all times.
- Operate with extra caution when flying over inclined surfaces (depending on aircraft speed). Recommended maximum inclination at different speeds: 15° at 1 m/s, 6° at 3 m/s and 3° at 5 m/s.
- Obey local radio transmission laws and regulations.

Radar Status Display

The Radar Status Indicator shows the current status of the Radar Terrain Follow System. See the table below:

Blinking Pattern	Description
Solid (Forward Radar: Blue, Rear Radar: Green, Downward Radar: Yellow)	Warming up
Blinking (Forward Radar: Blue, Rear Radar: Green, Downward Radar: Yellow)	Working
Off	Disconnected: check the cable connection

Radar Status will be shown in the DJI MG app. Pay attention to the prompt messages at all times and fix any issues that may occur.

Empty Tank Warning

Profile

The DJI MG app will indicate when the spray tank is empty. The aircraft will move according to the current operation or flight mode and will ascend 3 m* and hover (Smart or Manual Plus operation mode), or hover in place (Manual operation mode or F-mode).

* The feature for hovering at 3 m must be enabled in the DJI MG app. If not enabled, the aircraft will hover in place at its current altitude and position until you manually control it.

Using the Empty Tank Warning

1. In Manual operation mode or F-mode, press the Spray button on the remote controller when the empty tank warning is triggered to turn off the sprinklers. Failure to do so may cause the tank motor pump to idle, causing damage. In Smart or Manual Plus operation mode, the sprinklers will automatically turn off.
2. Ensure that the aircraft is in Manual operation mode, land, and stop the motors. Refill the spray tank and tighten the lid.
3. Press the Spray button on the remote controller to discharge the remaining air in the pump until the empty tank warning in the DJI MG app disappears. Press the Spray button again to stop discharging.
4. Ensure the aircraft is in Manual operation mode, and then take off.
5. Elevate the aircraft to a desired altitude in F-mode, Smart, or Manual Plus operation mode. Adjust the spraying distance between the aircraft and the vegetation to be within the working range (1.5-3.5 m). Refer to the Radar Terrain Follow System (p. 37) for details. Then enter the desired mode.

The remaining pesticide for empty tank warning can be set in the DJI MG app. Enter Operation View > ⚙ > Remaining Pesticide Status.

Return to Home (RTH)

- **Home Point:** The default Home Point is the first location where your aircraft received strong GNSS signals (the white GNSS icon is followed by at least four white bars). The Aircraft Status Indicator will blink several times after the Home Point has been recorded.
- **RTH:** The Return to Home (RTH) function brings the aircraft back to the last recorded Home Point.

When using System Data Protection, the Home Point will not be updated if you restart the aircraft after changing the battery.

There are two events that will trigger RTH procedure: Smart RTH and Failsafe RTH.

Smart RTH

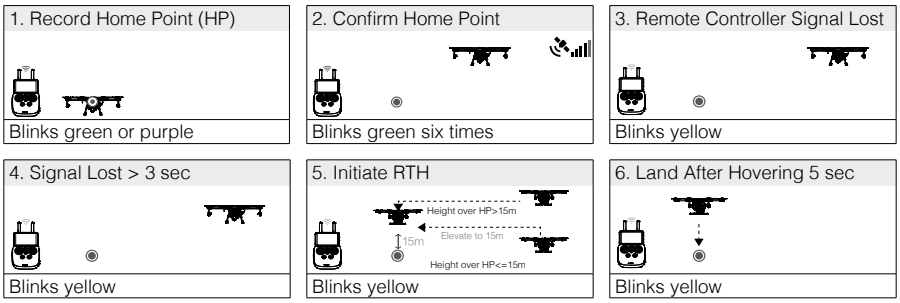
Press and hold the RTH button on the remote controller when GNSS is available to enable Smart RTH. Both Smart and Failsafe RTH use the same RTH procedure. With Smart RTH, you may control the aircraft's speed and altitude to avoid collisions when returning to the Home Point. The Aircraft Status Indicator will show the current flight mode during RTH. Press the Smart RTH button once to exit Smart RTH and regain control of the aircraft.

Failsafe RTH

Failsafe RTH must be enabled in the DJI MG app. If Failsafe RTH is not enabled, the aircraft will hover in place when the remote controller signal is lost.

Failsafe RTH activates automatically if the remote controller signal is lost for more than three seconds, provided that the Home Point has been successfully recorded, the GNSS signal is strong (white GNSS icon), and the compass is working normally. Users can interrupt the Return to Home procedure and regain control of the aircraft if the remote controller signal is recovered. Press the RTH button on the remote controller once to cancel RTH.

RTH Illustrator



Updating the Home Point

You can update the Home Point in the DJI MG app during flight. There are two options for setting the Home Point:

1. Set the aircraft's current coordinates as the Home Point.
2. Set the remote controller's current coordinates as the Home Point.

⚠ Ensure the space above the remote controller's GNSS module (located beneath the DJI logo) is not obstructed and that there are no tall buildings around when updating the Home Point.

Follow the instructions below to update the Home Point:

1. Go to DJI MG > Operation View.
2. Tap ••• > , select in Home Point settings to set the remote controller's current coordinates as the Home Point.
3. Tap ••• > , select in Home Point settings to set the aircraft's current coordinates as the Home Point.
4. The Aircraft Status Indicator will blink green to indicate that the new Home Point has successfully been set.

RTH Safety Notices

	The aircraft cannot avoid obstacles during RTH. Users can only control the speed and altitude of the aircraft. If the aircraft is in risk of collision, exit RTH immediately. Before each flight, it is important to set an RTH altitude that is appropriate for the given environment. Go to DJI MG > Operation View > ••• > > Set Return to Home Altitude.
	If the aircraft is flying under 15 meters and RTH (including Smart and Failsafe RTH) is triggered, the aircraft will first automatically ascend to 15 meters from the current altitude. You cannot control the aircraft during this ascent. In Smart RTH, you can exit RTH to cancel automatic ascent by pressing the RTH button once.
	The aircraft automatically descends and lands if RTH is triggered when the aircraft flies within a 20 m radius of the Home Point.
	The aircraft cannot return to the Home Point when GNSS signal is weak (displays red) or is unavailable.
	When the RTH altitude is set to more than 15 m and the aircraft is ascending between 15 m and the preset RTH altitude, the aircraft will stop ascending and immediately return to the Home Point if you push the throttle stick.

Low Battery Warnings

There are two low battery warnings:

1. Low Battery Warning: The Aircraft Status Indicator slowly blinks red. Fly the aircraft back and land it as soon as possible, stop the motors, and replace the batteries.
2. Critical Battery Warning: the Aircraft Status Indicator rapidly blinks red. The aircraft will begin to descend and land automatically.

Users can set the threshold of both low battery level warnings.

RTK Functions (for MG-1S RTK only)

The MG-1S RTK has a built-in DJI Onboard D-RTK, which provides more accurate data for centimeter-level positioning to improve agricultural operation when using with DJI D-RTK Base Station. The aircraft's heading reference from the dual antennas of the onboard D-RTK is more accurate than a standard compass sensor and can withstand magnetic interference from metal structures.

Ensure to use RTK functions within the RTK data transmission distance. Refer to Specifications for details.

Enable/Disable RTK

Ensure that the "RTK Module" is enabled and RTK data source is correctly set (D-RTK Base Station) before each use. Go to Operation View in the DJI MG app > ••• > RTK > RTK Module to view and set.

Using with the DJI D-RTK Base Station

1. Refer to the D-RTK Base Station User Guide to complete linking between the aircraft and base station and setup of the base station.
2. Power on the base station and wait for the system to start searching for satellites. The RTK status icon on top of the Operation View in the DJI MG app will show to indicate that the aircraft has obtained and used the RTK data from the base station.

Flight

Operation Environment

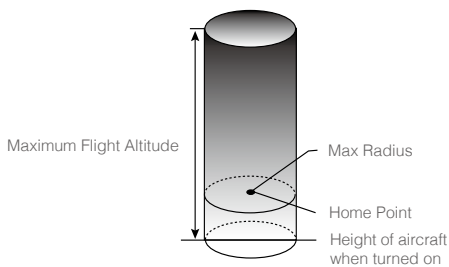
1. DO NOT use the aircraft in adverse weather conditions, such as heavy rain (precipitation rate exceeding 25 mm or 0.98 in within a 12-hour period), high winds exceeding 17 mph (28 kph), fog, snow, lightning, tornadoes, or hurricanes.
2. Only fly in open areas. Tall buildings and steel structures may affect the accuracy of the compass and the GNSS signal.
3. Maintain line of sight of the aircraft at all times, and avoid flying near obstacles, crowds, animals, trees, and bodies of water.
4. Avoid flying in areas with high levels of electromagnetism, including mobile phone base stations and radio transmission towers.
5. Ensure that there is a strong GNSS signal in the Smart or Manual Plus operation mode or F-mode.
6. DO NOT operate the aircraft indoors.
7. The MG-1S / MG-1S RTK cannot operate in P or F-mode within the earth's polar regions.

Flight Limits and No-Fly Zones

Users can set flight limits on height and distance.
Unmanned aerial vehicle (UAV) operators should abide by the regulations from self-regulatory organizations such as the International Civil Aviation Organization, the Federal Aviation Administration, and their local aviation authorities. For safety reasons, flight limits are enabled by default to help users operate this aircraft safely and legally.
When operating in P or F-mode, the height and distance limits and no-fly zones work together to monitor flight. In A-mode, only the height limit prevents the aircraft from going above 50 meters.

Maximum Height and Radius Limits

Users can change the maximum height and radius limits in the DJI MG app. Once complete, your aircraft will fly in a restricted cylinder that is determined by these settings. The tables below show the details of these limits.



P-mode or F-mode (with strong GNSS signal)	
	Flight Limits
Max Height	Flight altitude must be below the preset height.
Max Radius	Flight distance must be within the max radius.

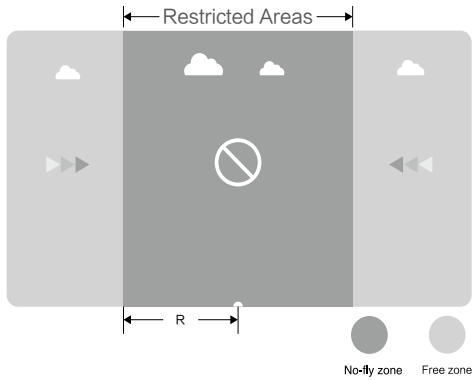
A-mode or other modes (with weak GNSS signal)	
	Flight Limits
Max Height	Flight altitude must be below the preset height.
Max Radius	No limits.

⚠
- If you fly into a no-fly zone, you can still control the aircraft, but cannot fly it further.
- If the aircraft loses GNSS signal or is in A-mode and flies out of the max radius but regains GNSS signal or the flight mode is switched from A-mode to other modes (with strong GNSS signal) afterwards, it will fly back within range automatically.

No-Fly Zones

Detailed no-fly zones are listed on the DJI official website at http://flysafe.dji.com/no-fly. No-fly zones are divided into airports and restricted areas. Airports include major airports and flying fields where manned aircraft operate at low altitudes. Restricted areas include borders between countries or sensitive sites. The details of the no-fly zones are explained below (GNSS required):

R mi around the restricted area (depending on the regulation) is a no-fly zone, inside which takeoff and flight are prohibited.



P-mode or F-mode (with strong GNSS signal)		
Zone	Restriction	Aircraft Status Indicator
No-Fly Zone	Motors will not start.	Blinking Red Ⓡ ·····
	If the aircraft loses GNSS signal or is in A-mode and enters the restricted area but regains GNSS signal or the flight mode is switched from A-mode to other modes (with strong GNSS signal) afterwards, the aircraft will enter semi-automatic descent and land.	
Free Zone	No flight restrictions.	None.

Semi-Automatic Descent: All stick commands except the throttle stick command are available during descent and landing. Motors will automatically stop after landing.

- When operating in no-fly zones, the Aircraft Status Indicator will blink red slowly and continue for 5 seconds, then switch to indicate the current flying status and continue for 12 seconds, at which point it will switch back to blinking red slowly.
- For safety reasons, DO NOT fly near airports, highways, railway stations, railway lines, city centers, or other busy areas. Ensure the aircraft is visible at all times.

Pre-Flight Checklist

1. The remote controller, aircraft battery is fully charged.
2. The pesticides required are adequate.
3. The position of aircraft battery is secured.
4. All parts are mounted securely.
5. All cables are connected correctly and firmly.
6. Propellers are unfolded and mounted onto the motors securely; frame arms are unfolded and arm sleeves are firmly tightened.
7. Spraying system is without any blockage.
8. Sprinkler hoses are clear from bubbles. Discharge bubbles, as they may lead to operation problems. Loosen the valve on the side of the spray nozzle and start the pump. Then tighten the valve and the sprinkler will work properly.

Calibrating the Compass

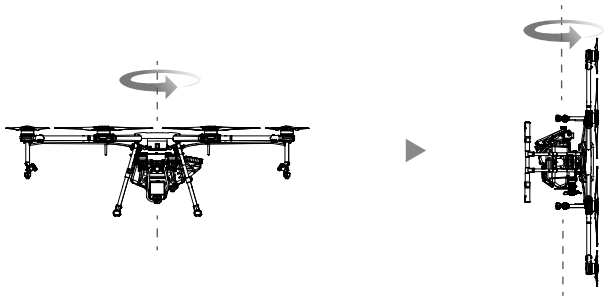
Because the aircraft's compass is highly sensitive, it requires calibration before your first flight and regularly to ensure optimal flight performance. Lack of calibration can lead to abnormal compass data, causing poor flight performance or failure.

- DO NOT calibrate your compass where there is a chance of strong magnetic interference, such as magnetite quarries, parking structures, and underground steel reinforcements.
- DO NOT carry ferromagnetic objects such as cellular phones with you during calibration.
- DO NOT calibrate near massive metal objects.
- DO NOT calibrate in an indoor space.

Calibration Procedures

Choose an open space to carry out the following procedures. It is recommended to calibrate the compass with an empty tank.

1. Open the DJI MG app. Tap Start to enter Operation View. Tap the Aircraft Status Bar on top of the screen and select Calibrate in the Aircraft Status List, then follow the on-screen instructions.
2. Hold the aircraft upright and rotate it 360° along its central axis until the Aircraft Status Indicator changes from solid blue to solid green.
3. Hold the aircraft with its nose facing up and rotate it 360° along its central axis.



4. The Aircraft Status Indicator shows the current flight mode when calibration is complete. If the Aircraft Status Indicator blinks red, repeat the steps above to recalibrate the compass.

When to Recalibrate

1. Compass data is abnormal, and the Aircraft Status Indicator is alternately blinking red and yellow.
2. Flying in a new location, or a location that is different from your last flight.
3. The mechanical structure of the aircraft has changed.
4. Severe drifting occurs in flight (e.g., the aircraft has difficulty flying in a straight line).

Calibrating the Flow Meter

It is recommended to calibrate the flow meter before your first flight to ensure precision spraying.

⚠
- Ensure that bubbles in the hoses are completely discharged before calibrating.
- Fill the spray tank with 5-10 L water when calibrating. Use a standard measuring cup of 5 L volume to ensure accuracy.
- Perform calibration in Smart operation mode or F-mode, with an end-to-end flying distance of over 100 m.
- It is recommended to set the pesticide usage for spray to about 1.7 gal/ac.

Calibration Procedures

1. When calibrating the flow meter in F-mode, plan the field first. Refer to Intelligent Operation Planning System (p. 30) for more details.
2. Fill the spray tank with about 1 L of water.
3. Power on the remote controller and the aircraft.
4. Loosen the valve on the side of the sprinkler and press the Spray button on the remote controller until the DJI MG app indicates normal spraying. Press the Spray button to stop spraying and tighten the valve.
5. Empty the tank. Fill it with 5-10 L water.
6. Go to DJI MG > Operation View > ●●● > ⚙ , then tap Calibrate in Flow IMU settings. Enter the volume of the water in the tank. Be sure to input the precise value to avoid calibration bias. Tap ? for calibration warnings.
7. When calibrating the flow meter in F-mode, start the task according to the Intelligent Operation Planning System.
   If calibrating the flow meter in Smart operation mode, record Point A and B, confirm route according to Smart operation mode, and enter Continuous Smart operation mode.

